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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,286	09/30/2003	Panagiotis G. Datskos	12610-1111 (46116/292588)	7079
23370	7590	09/08/2004	EXAMINER	
JOHN S. PRATT, ESQ KILPATRICK STOCKTON, LLP 1100 PEACHTREE STREET ATLANTA, GA 30309			MILLER, ROSE MARY	
			ART UNIT	PAPER NUMBER
			2856	

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/676,286	Applicant(s) DATSKOS, PANAGIOTIS G.	
	Examiner Rose M Miller	Art Unit 2856	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 June 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 and 25-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12, 14-18 and 25-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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**DETAILED ACTION*****Election/Restrictions***

1. Claim 1 will be allowable once the issues below are resolved. Accordingly, the restriction requirement as to the encompassed species is hereby withdrawn and claims 2-4, 6-9, 11-13, 15-17 25, and 27-33, directed to Species 1-8, are no longer withdrawn from consideration since all of the claims to these species depend from or otherwise include each of the limitations of the allowable subject matter present in the generic claim.

In view of the above noted withdrawal of the restriction requirement as to the linked species, applicant(s) are advised that if any claim(s) depending from or including all the limitations of the allowable generic linking claim(s) be presented in a continuation or divisional application, such claims may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application. Once a restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. See *In re Ziegler*, 44 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

***Double Patenting***

2. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

3. Applicant is advised that should claim 1 be found allowable, claim 5 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

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4. Claims 2, 3, 10, 11, 12, 26, 27, 28 are rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1, 3, 12, 13, 14, 35, 36, and 37, respectively, of prior U.S. Patent No. 6,651,504 B1. This is a double patenting rejection.

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1, 5, 6, 7, 8, 9, 14, 15, 16, 17, and 18 are rejected under the judicially created doctrine of double patenting over claims 1, 1, 4, 5, 6, 7, 9, 19, 20, 21, and 22, respectively, of U. S. Patent No. 6,651,504 B1 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows: For claims 1 and 5-9, the claims differ only in that the tuning means of the instant application fails to specify the specific use of energy other than acoustic to tune the microstructures and therefore fully encompasses the invention claimed in the Patent. For claims 14-18, the claims differ in the removal of the specific tuning means from the claims. As the removal of an element and its function is well known and would have been obvious to one of ordinary skill in the art at the time the invention was made, the claims are not patentably distinct from each other.

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-9, 25, and 26-33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-4 are rejected as being indefinite as the phrase "said predetermined", found on lines 18-19 of claim 1, is confusing and indefinite. It appears applicant is referring to the "predetermined resonant frequency" recited previously in the claim but it is unclear from the claim wording at present. In fact the wording of the claims is a little awkward as it is unclear what the "acoustic energy" recited has. A suggestion for correction is to alter the complete phrase to read --acoustic energy having a frequency corresponding to said predetermined resonant frequency moves said microstructure--. Claims 2-4 are rejected as they fail to correct the problems presented by Claim 1 from which they depend.

Claims 5-9 are rejected as being indefinite as the phrase "said predetermined", found on lines 18-19 of claim 5, is confusing and indefinite. It appears applicant is referring to the "predetermined resonant frequency" recited previously in the claim but it is unclear from the claim wording at present. In fact the wording of the claims is a little awkward as it is unclear what the "acoustic energy" recited has. A suggestion for correction is to alter the complete phrase to read --acoustic energy having a frequency corresponding to said predetermined resonant frequency moves said microstructure--. Claims 6-9 are rejected as they fail to correct the problems presented by Claim 5 from which they depend.

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Claim 25 is rejected as being indefinite as the phrase "said microstructure", found on lines 11 and 12 of the claims, lacks a proper antecedent basis. Claim 25 previously recites a "microstructure array comprising individual microstructures". Therefore, there is no proper antecedent basis for the phrase "said microstructure". A suggestion for correction is to alter the phrase to read --at least one of said microstructures-- and --said at least one microstructure--, respectively.

Claims 26-33 are rejected as being indefinite as the phrase "said selected microstructure", found on line 12 of Claim 26, lacks a proper antecedent basis. There is no "selected microstructure" previously recited in the claim. A suggestion for correction is to alter the phrase to read --a selected microstructure--. Claims 27-33 are rejected as they fail to correct the problem presented by Claim 26 from which they depend.

Claim 29 is further rejected as being indefinite as the phrase "said microstructure", found on lines 2 and 3 of the claim, lack a proper antecedent basis. Claim 26, from which Claim 29 depends, recites "a microstructure array", "individual microstructures", and "said selected microstructure" which makes it unclear as to which "microstructure" the above phrase is referring to. Correction is necessary to fully determine the scope of the claimed invention.

Claim 33 is further rejected as being indefinite. Claim 30, from which claim 33 depends, recites an optical detecting means. How then does the change of resonance detecting means recited here co-operate with the optical detecting means? It is unclear from the claim exactly how the two co-operate together to perform the "detecting" of the acoustic energy applied to the microstructure array.

### ***Allowable Subject Matter***

9. Claim 13 is allowed.

10. Claim 25 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

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11. Claims 4 and 29-33 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

12. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record fails to teach and/or suggest a microstructure including first and second layers being formed from first and second materials respectively, said first material having a physical response in reaction to at least one form of energy other than acoustic energy that is different from a physical response of said second material in reaction to said at least one form of energy other than acoustic energy in combination with the tuning of the microstructure by dampening said microstructure such that the natural acoustic resonant frequency of the microstructure is altered.

### ***Conclusion***

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

**Seidel (US 4,885,781)** discloses a frequency-selective sound transducer.

**Gambino et al. (US 5,565,847)** discloses a magnetic tag using acoustic or magnetic interrogation.

**Naughton (US 5,925,822)** discloses a microelectromechanical cantilever acoustic sensor.

**Ando et al. (US 6,012,334)** discloses a vibration wave detecting method and a vibration wave detector utilizing cantilever resonators.

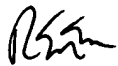
**Ikeuchi et al. (US 6,438,243 B1)** discloses a vibration wave detector utilizing cantilever resonators.

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14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rose M Miller whose telephone number is 571-272-2199. The examiner can normally be reached on Monday - Thursday, 7:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on 571-272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system; contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



RMM

3 September 2004



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